

REMARKS / ARGUMENTS

In complete response to the Final Office Action dated April 29, 2008, on the above identified application, reconsideration is respectfully requested. Claims 19, 20, and 24-41 are pending in this application.

Finality of Instant Office Action:

The Examiner states that this rejection is final, citing MPEP §706.07(a). The Applicants traverse the finality of this rejection.

MPEP §706.07(a) states:

"Under present practice, second or any subsequent actions on the merits shall be final, except where the examiner introduces a new ground of rejection that is neither necessitated by applicant's amendment of the claims, nor based on information submitted in an information disclosure statement filed during the period set forth in 37 CFR 1.97(c) with the fee set forth in 37 CFR 1.17(p).."

The Applicants respectfully contend that the current office action contains a new ground of rejection not necessitated by Applicant's amendment of the claims. Applicant's previous response, submitted on 1/24/2008 contained only claim amendments which consolidated existing claimed subject matter. Therefore, the Applicants respectfully contend that the finality of the instant office action should be traversed.

Claim Rejections under 35 U.S.C. § 103(a):

Claims 19 – 20, 26, 31, 33, 35-36 and 40 are rejected as being unpatentable over Colombo et al ("Colombo '678"). For at least the following reasons, the Applicants respectfully contend that the claims of the instant application are not obvious in light of Colombo '678.

Selection of a silicon source with a vapor pressure of at least 50 torr at about 20 C is not an obvious selection, in that numerous silicon containing compounds which do not meet this criterion exist. Precursors which do not meet this criterion require extra processing steps and/or equipment (bubbler, vaporizer, etc). As Colombo '678 makes no mention of the silicon precursor's vapor pressure, therefore selection of a precursor which meets this criteria cannot be a simple optimization asserted by the Examiner. Colombo '678 describes general process conditions (see para 12) but does not the properties of the silicon precursor.

Furthermore, Colombo '678 does not describe a method of forming a MSiN or MSiON dielectric film in a single step such that a post deposition step is not necessary. Colombo '678 requires post deposition steps (see para 0018 and 0025), and therefore teaches away from the single step approach of the instant invention. For at least these reasons, the Applicants respectfully contend that the basis for this rejection should be reconsidered.

Claims 24, 29 – 30, 32, 34, 38 and 41 are rejected as being obvious in light of the combination of Colombo '678 with Buchanan '591. The addition of Buchanan '591 does not remedy the aforementioned deficiencies of the Colombo '678 reference. Further, since Buchanan '591 discloses a deposition process for a metal oxide film, on a silicon layer, and it does not teach, disclose or suggest a deposition of a MSiO or MSiN film (i.e. a layer containing silicon), as per the instant invention, Buchanan '591 either alone or in combination with Colombo '678 teaches away from the instant invention. For at least these reasons, the Applicants respectfully contend that the basis for this rejection should be reconsidered.

Claims 21, 25, 27-28, 37 and 39 are rejected as being obvious in light of the combination of Colombo '678 with Buchanan '591 and Oshita.

The addition of Oshita does not remedy the aforementioned deficiencies of Colombo '678 and Buchanan '591. Oshita describes methods of depositing films

which contain a minimum of carbon content, from a precursor which contains carbon (namely SiH(NEt₂)₃). Oshita does not teach or suggest a silicon source which is free of carbon. The Applicants respectfully contend that the Examiner's statement that "it would have been obvious to have a molecular structure absent carbon, as carbon acts as an impurity which increases leakage current ..." is an example of impermissible hindsight. One of skill in the art, taught by Oshita the desirability of minimizing the carbon content in the final film, would not find a teaching or a suggestion as to carbon free silicon precursors suitable for deposition of MSiON or MSiN films. For at least these reasons, the Applicants respectfully contend that the basis for this rejection should be reconsidered.

Appl. No. 10/591,629
Attorney Docket No. Serie 6550 CIP
Amdt. dated June 30, 2008
Response to Final Office Action of April 29, 2008

CONCLUSION

Accordingly, it is believed that the present application now stands in condition for allowance. Early notice to this effect is earnestly solicited. Should the Examiner believe a telephone call would expedite the prosecution of the application, he is invited to call the undersigned attorney at the number listed below.

Respectfully submitted,



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